

# Atlantic Richfield Company

**Jack Oman**  
Project Manager

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January 10, 2017

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Mr. Dave Seter  
Remedial Project Manager  
U.S. Environmental Protection Agency - Region 9  
75 Hawthorne Street, SFD-9-1  
San Francisco, CA 94105

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Dear Mr. Seter:

Pursuant to the above referenced orders issued by the U.S. Environmental Protection Agency - Region 9 (EPA), Atlantic Richfield Company (ARC) has prepared this December 2017 monthly report for RI/FS and Operations and Maintenance (O&M) activities at the Anaconda Copper Mine Site (Site).

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## Site Security and O&M Activities

- ☐ Site personnel continued with routine O&M, security and bird deterrent activities including operation of Wetland Wailers on FMS Ponds 'B' and 'C' and the Slot Pond. We perform routine maintenance and change the start/stop times on the Wetland Wailers as required.
- ☐ In order to lessen the possibility of birds becoming habituated to the wind dancers and bird mitigation flags remaining in one location, the flags and wind dancers are relocated approximately every two weeks, or as observations by site personnel warrant. The wind dancers remain activated during daylight hours on the VLT, Pump back/LEP, FMS Evaporation Ponds 'B' and 'C' and the Slot Pond. Also on "A" pond and the evaporation cell when wet.
- ☐ In accordance with the Bird Mitigation SOP, LEP and Pump backponds Bird Gard® towers 'A', 'B' and 'C' were on all month.
- ☐ Completed assigned security rounds, including checking all perimeter fencing around the site twice weekly.
- ☐ Continued to monitor the security cameras installed at locations around the main gate and Arimetco gate. No photos of significance were noted during the month of December.
- ☐ Adjusted the specific gravity on some of the transducers to match staff gauge readings more closely.
- ☐ Staff gauge readings for the PWS evaporation pond levels: North Cell = 0.0 feet; Middle Cell = 0.0 feet; South Cell = 0.0 feet.

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#### Site Security and O&M Activities – Continued

- ☐ Arimetco heap leach fluid management system (FMS): Solution depth per pond, in feet: Phase 1 Pond = 4.48 feet; FMS Evaporation Pond 'A' = 8.55 feet; FMS Evaporation Pond 'B' = 6.76 feet; and FMS Evaporation Pond 'C' = 6.53 feet; VLT Pond = 10.15 feet; Slot 2 Pond = 17.09 feet.
- ☐ The solution flow from the Mega Sumps was directed to FMS Evaporation pond 'C' until the 19<sup>th</sup> of December when it was switched to pond "B".
- ☐ Monitored the leak detectors throughout the site and pumped so lution as needed. A total of approximately 21,302 gallons of solution was pumped from the leak detectors during the month of December. A total of 328,252 gallons was pumped in 2017.
- ☐ Monitored and downloaded data from the transducers located in the VLT, VLT Sediment Pond, Slot Sediment, Slot 2 pond, Phase 1, and FMS Ponds 'A', 'B,' and 'C'. Cleaned and reset transducers adjusting the specific gravity to match the staff gauges more closely.
- ☐ Sampled for total dissolved solids (TDS) from all FMS ponds.
- ☐ Put up new Mylar during the week of December 17th at Slot, VLT, and FMS ponds as part of the Bird Mitigation Program.
- ☐ Installed two more wind dancers due to standing water, one at the enhanced evaporation basin and one at the south lined evaporation pond as part of the Bird Mitigation Program.
- ☐ Inspected all onsite generators the week of December 17th, 2017.
- ☐ Fixed a broken pipe at the south pump back pond the week of December 24th, 2017.
- ☐ Repaired bird guard tower "a" by replacing solar controller the week of December 24th, 2017.
- ☐ Cleaned out VLT ditch.
- ☐ During the month of December, the Site received 0.03 inches of rain on the 18th of December, and 0.01 inches of rain on the 20th of December which brings the total up to 7.25 inches for the year 2017.

#### Site Characterization Activities

- ☐ Continued 4Q 2017 groundwater monitoring (GWM) post-event activities.
- ☐ Conducted 4Q 2017 domestic well monitoring (DWM) post-event activities.
- ☐ Began 1Q 2018 GWM pre-event activities
- ☐ Site-wide groundwater elevation measurements were obtained from wells on December 18-19.
- ☐ The Pit Lake pressure transducer recorded a Pit Lake water elevation of 4238.13 feet amsl on December 19, 2017, the Pit Lake elevation increased by 0.26 feet relative to the elevation recorded on November 19, 2017, and an increase of approximately 3.27 feet since December 19, 2016. The Pit Lake elevation was surveyed on December 19 at 4238.50 feet amsl.
- ☐ Soil moisture probe data downloads, lysimeter field observations, and lysimeter sampling were conducted on December 5 and 20.
- ☐ Conducted Wabuska Drain surface/drain water observations on December 6, 15, and 20.
- ☐ Continued the compilation of data for inclusion in the 1Q, 2Q and 3Q 2017 GMRs and DWMRs.
- ☐ Routine database management in support of Site investigations and monitoring activities.
- ☐ Received EPA comments on the Draft OU-3 HHRA Work Plan on December 11, 2017.
- ☐ Continued development of plans for reductions to the groundwater and domestic well monitoring programs.
- ☐ Continued preparation of the Wabuska Drain (OU-7) Physical Conceptual Site Model Update report.
- ☐ Initiated further evaluation of the Wabuska Drain (OU-7) background concentration limits.

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Site Security and O&M Activities

- ☐ Continue routine Site O&M, security and bird deterrent activities.
- ☐ Submit a post-operation report for the enhanced evaporation system on top of the VLT HLP.

Site Characterization Activities

- ☐ Continue groundwater elevation and pit lake level measurements and meteorological monitoring.
- ☐ Continue biweekly lysimeter maintenance activities and soil moisture monitoring.
- ☐ Continue Wabuska Drain surface/drain water observations concurrent with lysimeter/soil moisture probe monitoring activities.
- ☐ Continue the bottled water program for those properties that qualify.
- ☐ Perform 1Q 2018 GWM pre-event activities (February).
- ☐ Continue development of plan for reductions to the groundwater and domestic well monitoring programs.
- ☐ Continue the compilation of 1Q, 2Q, and 3Q 2017 groundwater monitoring and domestic well monitoring data.
- ☐ Continue development of response to EPA Draft OU-3 HHRA comments.

Please contact me at (657) 529-4581 or via e-mail at [jack.oman@bp.com](mailto:jack.oman@bp.com) if you have any questions or comments about this December 2017 monthly report.

Sincerely,



Jack Oman  
Project Manager

Attachment

cc: Chuck Stilwell, Atlantic Richfield Company – via electronic mail  
Nathan Block, Atlantic Richfield Company – via electronic mail  
Cord Harris, Atlantic Richfield Company – via electronic mail  
Brian Johnson, Atlantic Richfield Company – via electronic mail  
Jim Chatham, Atlantic Richfield Company – via electronic mail  
Travis Phelps, Arcadis – via electronic mail  
Randy Miller, Broadbent – via electronic mail  
Mike Mahon, Copper Environmental – via electronic mail  
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